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**NOTES ON GEOGRAPHIC DISTRIBUTION**

# Amphibia, Anura, *Physalaemus rupestris* Caramaschi, Carcerelli and Feio, 1991: Distribution extension and geographic distribution map

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The frog genus *Physalaemus* Fitzinger, 1826 is currently composed of 42 species, distributed in South America (Cruz et al. 2008; Frost 2009). The species are arranged into seven species groups: *P. cuvieri* group, *P. signifier* group, *P. albifrons* group, *P. deimaticus* group, *P. gracilis* group, *P. henselii* group and *P. olfersii* group (Nascimento et al. 2005).

One of these groups, the *Physalaemus deimaticus* group, which includes *Physalaemus erythros* Caramaschi, Feio and Guimarães-Neto, 2003, *Physalaemus deimaticus* Sazima and Caramaschi, 1988, and *Physalaemus rupestris* Caramaschi, Carcerelli and Feio, 1991 is restricted to high elevation inland montane fields, known as *campos rupestres*, in the state of Minas Gerais, southeastern Brazil. *Physalaemus deimaticus* and *P. rupestris* are know only from their type localities, at *Serra do Cipó*, municipality of Jaboticatubas and at *Serra do Ibitipoca*, municipality of Lima Duarte, respectively (Sazima and Caramaschi 1988; Caramaschi et al. 1991; Nascimento et al. 2005; Cruz and Feio 2007; Frost 2009). Recently, *P. erythros* were found at *Serra do Caraça*, municipality of Catas Altas, 33 Km northwards its type locality, at *Serra do Itacolomi*, municipality of Ouro Preto (Baêta and Silva 2009).

**Figure 1.** Adult male of *Physalaemus rupestris* (MZUFV 9039) from Serra Negra, municipality of Rio Preto, state of Minas Gerais, Brazil. Photo by Julia Tolledo.

*Physalaemus rupestris* is a small frog (snout-vent length 15.9–18.3 mm in males, 17.2–17.9 mm in females; see Caramaschi et al. 1991 and Nascimento et al. 2001) and it was described only from mature females (Caramaschi et al. 1991). Additional information about males, call, clutches and tadpoles of *P. rupestris* were registered later (Nascimento et al. 2001).

Because of its assumed restricted distribution and occurrence in small and isolated populations, *P. rupestris* was previously considered threatened in Minas Gerais and classified with "Vulnerable" status (Feio 1998). Currently, due to the lack of information on distribution and ecological requirements, *P. rupestris* is considered as "Data Deficient" (DD) in the latest revisionary work on threatened species of Minas Gerais and Brazil (Drummond et al. 2008; Machado et al. 2008), in the IUCN Red List of Threatened Species (Nascimento and Pimenta 2004), and in the compilation of threatened amphibians of the world by Stuart et al. (2008). In this note we report the first records of *P. rupestris* outside its type locality.

In December 2008, during a fieldwork at *Serra Negra*, municipality of Rio Preto, state of Minas Gerais, we collected two individuals of *P. rupestris* (Figure 1) in Marciano region (21°58'33" S, 43°54'10" W; elevation 1350 m), district of Funil (collection permit #10504-1 by *Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis* - IBAMA). The Marciano region is a private property enclosed by mountains and valleys covered by Atlantic Rainforest remnants and *campos rupestres*. It is similar to the type locality, at Ibitipoca State Park, with small bushes and grass on a sandy soil. *Physalaemus rupestris* was found calling in a seasonally flooded area covered by grass and bushes in *campo rupestre* (Figure 2). Although many individuals were calling from the leaf litter near the flooded area, it was very difficult to collect more specimens because of their cryptic behavior (as reported by Nascimento et al. 2001). The high density of calling males suggests that the species occurs at relatively high densities in *Serra Negra*. This new record extends the known distribution of *Physalaemus rupestris* approximately 30 km southward the Ibitipoca State Park (Figure 3).

The specimens from *Serra Negra* have a snout-vent length (16.86 mm in male; 18.14 mm in female; n = 2) similar to the known body size of the species (Caramaschi et al 1991; Nascimento et al. 2001). They were deposited in the herpetological collection of *Museu de Zoologia João Moojen*, *Universidade Federal de Viçosa*, in Viçosa, Minas Gerais, Brazil, under the register numbers MZUFV 9039 and MZUFV 9040.

The present record provides an important contribution to the knowledge of the geographic distribution of *Physalaemus rupestris*, showing that this species is more widespread than previously thought. This new finding is also relevant for developing conservation strategies for this species.

**Figure 2.** *Campo rupestre* at Serra Negra mountain, Marciano region, municipality of Rio Preto, state Minas Gerais, Brazil. Photo by Luiz Gustavo Dias.

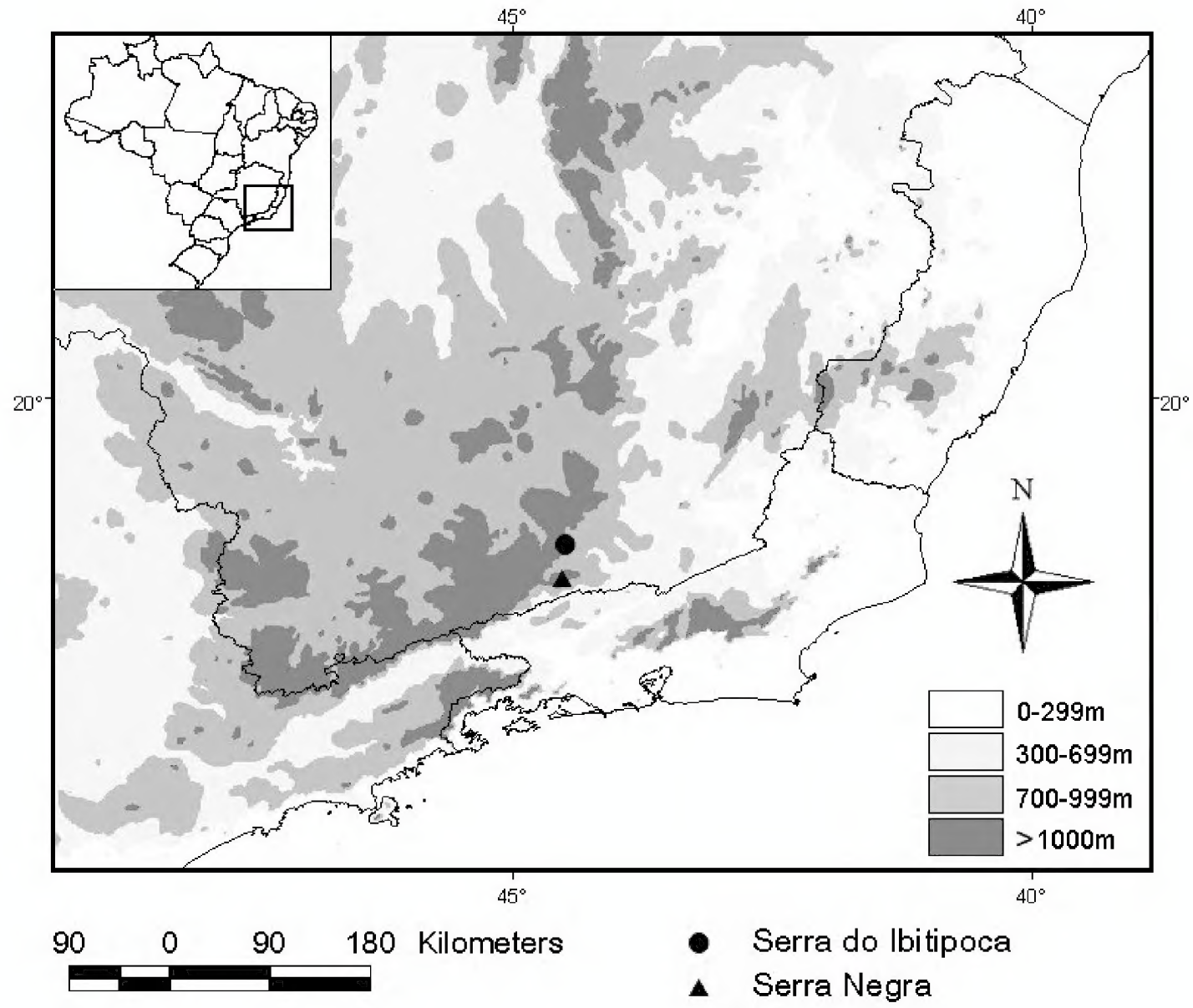


**Figure 3.** Distribution map of *Physalaemus rupestris*: Circle = *Serra do Ibitipoca* (type locality), municipality of Lima Duarte; Triangle = *Serra Negra*, municipality of Rio Preto (new record). Both records in state of Minas Gerais.

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## Literature cited

Baêta, D. and D.H. Silva. 2009. Amphibia, Anura, Leiuperidae, *Physalaemus erythros* Caramaschi, Feio and Guimarães-Neto, 2003: Distribution extension. Check List 5(4): 812-814.

Caramaschi, U., L.C. Carcerelli and R.N. Feio. 1991. A new species of *Physalaemus* (Anura: Leptodactylidae) from Minas Gerais, Southeastern Brazil. Herpetologica 47(2): 148-151.

Caramaschi, U., R.N. Feio and A. Guimarães-Neto. 2003. A new, brightly colored species of *Physalaemus* (Anura: Leptodactylidae) from Minas Gerais, Southeastern Brazil. Herpetologica 59(4): 519-524.

Cruz, C.A.G. and R.N. Feio. 2007. Endemismos em anfíbios em áreas de altitude na Mata Atlântica no sudeste do Brasil; p. 117-126 *In*: L.B. Nascimento and M.E. Oliveira (ed). Herpetologia no Brasil II. Belo Horizonte: Sociedade Brasileira de Herpetologia.

Cruz, C.A.G., C.S. Cassini and U. Caramaschi. 2008. A new species of the genus *Physalaemus* Fitzinger, 1826 (Anura, Leiuperidae) from Southern Brazil. South American Journal of Herpetology 3(3): 239-243.

Drummond, G.M., A.B.M. Machado, C.S. Martins, M.P. Mendonça and J.R. Stehmann. 2008. Listas vermelhas das espécies da fauna e da flora ameaçadas de extinção em Minas Gerais. Belo Horizonte: Fundação Biodiversitas. CD-Rom.

Feio, R.N. 1998. *Physalaemus rupestris*; p. 467-468 *In*: A.B.M. Machado, G.A.B. Fonseca, R.B. Machado, L.M.S. Aguiar and L.V. Lins (ed.). Livro Vermelho das espécies ameaçadas de extinção da fauna de Minas Gerais. Belo Horizonte: Fundação Biodiversitas.

Frost, D.R. 2009. Amphibian Species of the World: an online reference. Version 5.0. Eletronic Database accessible at http://research.amnh.org/herpetology/

amphibia/index.html. New York: American Museum of Natural History. Captured on 06 June 2009.

Machado, A.B.M., G.M. Drummond and A.P. Paglia. 2008. Livro vermelho da fauna brasileira ameaçada de extinção. Volume II. Brasília / Belo Horizonte: : MMA / Fundação Biodiversitas. 908 p.

Nascimento, L.B. and B. Pimenta. 2004. *Physalaemus rupestris*. 2008 IUCN Red List of Threatened Species. Electronic Database accessible at http://www.iucnredlist.org/. Captured on 14 January 2009.

Nascimento, L.B., R.R. Carvalho Jr., H. Wogel, D.S. Fernandes and R.N. Feio. 2001. Reprodução e descrição do girino de *Physalaemus rupestris* Caramaschi, Carcerelli and Feio, 1991 (Amphibia, Anura, Leptodactylidae). Boletim do Museu Nacional 450: 1-10.

Nascimento, L.B., U. Caramaschi and C.A.G. Cruz. 2005. Taxonomic review of the species groups of the genus *Physalaemus* Fitzinger, 1826 with revalidation of the genera *Engystomops* Jiménez-De-La-Espada, 1872 and *Eupemphix* Steindachner, 1863 (Amphibia, Anura, Leptodactylidae). Arquivos do Museu Nacional 63(2): 297-320.

Sazima, I. and U. Caramaschi. 1988. Descrição de *Physalaemus deimaticus*, sp. n., e observações sobre comportamento deimático em *P. nattereri* (Steindn.) – Anura, Leptodactylidae. Revista de Biologia 13: 91-101.

Stuart, S.N., M. Hoffmann, J.S. Chanson, N.A. Cox, R.J. Berridge, P. Ramani and B.E. Young. 2008. Threatened Amphibians of the World. Barcelona / Gland / Arlington: Lynx Edicions / IUCN / Conservation International. 758 p.

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